

SHORT REPORT

Social and behavioural factors associated with condom use among direct sex workers in Siem Reap, Cambodia

M L Wong, I Lubek, B C Dy, S Pen, S Kros, M Chhit

Sex Transm Infect 2003;**79**:163–165

Objectives: To determine the social and behavioural factors associated with condom use among direct sex workers in Siem Reap, Cambodia.

Methods: Using a structured behavioural questionnaire, interviews were conducted with 140 direct sex workers attending a health centre in Siem Reap for HIV screening.

Results: Consistent condom use with their clients was reported by 78% of sex workers compared to only 20% with their non-paying partners. Consistent condom use with clients was significantly higher among higher income than lower income sex workers (adjusted prevalence ratio: 1.91, 95% CI: 1.15 to 3.18) and those with good rather than poor negotiation skills (adjusted prevalence ratio: 1.51, 95% CI: 1.01 to 2.26), after adjustment for age, educational level, marital status, number of sexual encounters per week, and knowledge of AIDS/HIV and sexually transmitted infections. The most frequently reported reason for not using condoms with clients was not being able to persuade them (66.7%), while for non-paying partners, the reason was that they loved them (60.0%).

Conclusion: To complement the government's current programme of client education, 100% condom policy and brothel administrative measures, additional strategies to increase condom use among clients and non-paying partners should be directed at (i) the social policy and community levels to address sex workers' economic and cultural barriers to condom use, and (ii) personal level empowerment through developing sex workers' condom negotiation skills.

The rapid spread of HIV/AIDS and sexually transmitted infections (STIs) in Cambodia has been attributed to extensive solicitation of sex workers by Cambodian men. The 100% condom use programme for entertainment establishments, implemented in 1998, has increased condom use among direct sex workers from 53.4% in 1998 to 78.1% in 1999 in the pilot area, with a concomitant significant decline in HIV.¹ Recent data suggest continuing HIV decline nationwide.² Despite this success, condom use should be increased to a higher level, particularly in Siem Reap with massive expansion in tourism, high HIV prevalence among direct sex workers (43%),³ and low condom use among their clients (61.4%).⁴

Although studies on condom use and sociodemographic factors associated with its use among sex workers in Cambodia are available,^{1–4} less is known of the psychological and behavioural factors associated with condom use. Hence, our study in Siem Reap not only assessed the prevalence of condom use among direct sex workers with their clients and non-paying partners, but also analysed behavioural factors associated with condom use.

METHODS

About 250 direct female sex workers are registered in 19 brothels in Siem Reap. All 140 direct sex workers screened for STIs and HIV at a health centre in 2001 were interviewed by a local trained medical assistant on consistent condom use and condom negotiation with clients and non-paying partners in the past week and knowledge of STI/HIV/AIDS symptoms. All participated in the survey.

Cox's proportional hazards regression model for cross sectional data⁵ was used to determine factors that remained significantly associated with consistent condom use after controlling for potential confounders.

RESULTS

The median age of the sex workers was 22 years, their median duration of work was 1 year, and 51.4% had never attended school. While 59.4% were single, 37.0% were separated or widowed. Their median income per month was US\$100. Almost all knew about the incurability of AIDS (92.9%) and the effectiveness of condoms in preventing HIV/AIDS (90.7%) and about one third (34.3%) perceived themselves to be vulnerable to the disease.

As shown in table 1, sex workers engaged in sex with 10 male clients per week. Thirty five (25%) engaged in sex with non-paying partners. Consistent condom use with clients was reported by 77.9% of the sex workers compared to only 20% with their non-paying partners (boyfriends). The majority (90%) suggested condom use to all their clients but only 58.7% succeeded in getting them to use condoms. The most frequently reported reason for not using condoms with their clients was not knowing how to persuade them (66.7%) while for non-paying partners, the reason was that they loved them (60.0%).

In the multivariate analysis (table 2), only sex workers' income and negotiation skills (defined as success rate in persuading clients to use condoms) showed a significant association with consistent condom use. Consistent condom use was not associated with age, marital status, number of clients, or knowledge of HIV/AIDS.

DISCUSSION

Condom use among direct sex workers in our study is lower than that in Thailand⁶ and Singapore,⁷ where almost all used condoms. Knowledge on the non-curability of AIDS and condom effectiveness was not associated with condom use. This disconnection between knowledge and behaviour may be explained by two factors found to be significantly associated with consistent condom use in our study—namely, economic barriers and lack of negotiation skill. The importance of negotiation skill was supported by another finding which shows the main reason for not using condoms with clients was not being able to persuade them. To complement existing brothel policies and client education on condom use, additional condom promotion strategies should be directed at the policy and community levels to address sex workers' economic and

Table 1 Sexual behaviour and condom use among direct sex workers, Siem Reap, Cambodia, 2001

Variable	Sex workers (n=140)
Clients per week	
Mean (SD)	10.1 (8.5)
Median	10
Range	1–50
No (%) engaging in sex with non-paying partners	35 (25.0)
Non-paying partners per week	
Mean (SD)	3.4 (5.1)
Median	2.0
Range	0–30
No (%) using condoms with clients	
Always	109 (77.9)
More than half the time	30 (21.4)
About half the time	1 (0.7)
Less than half the time	0
Never	0
No (%) using condoms with non-paying partners	
Always	7 (20.0)
More than half the time	6 (17.1)
About half the time	0 (0)
Less than half the time	2 (5.7)
Never	20 (57.1)
No (%) who asked clients to use condoms	126 (90.0)
No (%) reporting success in getting clients to use condoms	
<50%	2 (1.6)*
50–<100	50 (39.7)
100% (all clients)	74 (58.7)†

*Percentages calculated out of 126 sex workers who suggested condom use.

†Percentage of consistent condom users (77.8%) is greater than percentage who could persuade all clients to use condoms (58.7%) as some consistent condom users would always refuse sex with clients who cannot be persuaded.

Table 2 Multivariate analysis of factors associated with consistent condom use with clients among direct sex workers, Siem Reap, 2001

Variable	Consistent condom use	
	%	Adjusted† prevalence ratio (95% CI)
Age group (years)		
<20	87.5	1
≥20	75.0	0.97 (0.59 to 1.59)
Marital status		
Single	82.9	1
Divorced	69.6	0.99 (0.59 to 1.63)
Clients per week		
<5	73.6	1
5–15	76.9	1.16 (0.66 to 2.06)
≥16	83.3	1.26 (0.69 to 2.29)
Monthly income (\$US)		
<50	51.2	1
50–99	75.0	1.61 (1.07 to 2.40)*
≥100	93.2	1.91 (1.15 to 3.18)*
Combined score of non-curability of AIDS and effectiveness of condoms		
One answer correct	60.0	1
Both answers correct	80.0	1.17 (0.58 to 2.39)
Negotiation skill (success rate‡ in persuading clients to use condoms)		
Poor (<100% success)	61.3	1
Good (100% success)	90.4	1.51 (1.01 to 2.26)*

†Adjusted for all the other variables in the table.

‡Success rate is the reported percentage who used condoms following negotiation. For example, if 3 out of 10 clients are persuaded to use condoms, the success rate would be 30%.

*p<0.05.

cultural barriers to condom use, and at the personal level to develop sex workers' negotiation skills. The latter would not only empower sex workers to successfully get clients to use condoms when brothel support is lacking, but it would also increase their sense of control over their work situation and hence prepare them for future empowerment and reorganisation efforts to improve their self reliance and welfare. Female controlled barrier methods should also be considered. The

female condom must become more acceptable to men; earlier research on this showed mixed results⁸ with its unaesthetic appearance being the main reason for resistance to its use.^{9, 10}

Existing brothel measures and client education have to be monitored and further strengthened to provide a supportive environment to maintain condom use. The 100% condom policy has become, during 2002, a joint responsibility of the brothel owners, peer educators, community outreach workers,

provincial health authorities, and sex workers. Hence, the sex workers can be further empowered by involving them in the decision making and negotiation concerning safer sex practices at their workplace with their employers and health authorities. Negotiation skills training workshops and ongoing monitoring of brothel measures by health staff, two entry points for greater sex worker involvement, may encourage them to share problems and suggest practical solutions on condom negotiation and other related workplace issues. Programmes training sex workers for alternative employment, undertaken by other organisations in Siem Reap, should be monitored for effectiveness in improving the economic situation of sex workers.

The low level of condom use with non-paying partners is not an easy problem to solve. As the main reason for not using condoms was "love for their boyfriends," innovative health education messages, designed to enhance compatibility to the romantic values in relationships, may contribute towards wider community efforts to increase condom use in this group.

Authors' affiliations

M L Wong, Department of Community, Occupational and Family Medicine (MD 3), Faculty of Medicine, National University of Singapore, Singapore

I Lubek, Department of Psychology, University of Guelph, Canada

B C Dy, M Chhit, Department of Health, Siem Reap Province, Cambodia

S Pen, S Kros, Provincial AIDS Office, Siem Reap Province, Cambodia

M Chhit, Mondol Moi Health Centre, Siem Reap, Cambodia

Correspondence to: Dr Mee Lian Wong, Department of Community, Occupational and Family Medicine (MD 3), Faculty of Medicine, 16 Medical Drive, National University of Singapore, Singapore 117597; cofwml@leonis.nus.edu.sg

Accepted for publication 2 September 2002

REFERENCES

- 1 **World Health Organization**. *Controlling STI and HIV in Cambodia: the success of condom promotion*. Manila: WHO, Regional Office for Western Pacific, 2001.
- 2 **Leng HB**, Saidel T, Steen R, *et al*. Evidence of low STI prevalence in Cambodia supports recent behavioural and HIV prevalence trends. Abstracts of XIVth International AIDS Conference. Barcelona, July 2002.
- 3 **Mondol Moi Health Centre**. CDAG (Centre de Dépistage Anonyme et Gratuité) Summary Data for 2001. Siem Reap: Centre for Anonymous and Free Testing, 2001 (unpublished data).
- 4 **Sopheab H**, Phalkun H, Leng HB, *et al*. Cambodian Household Male Survey (BSSIV 2000) Cambodia: National Center for HIV/AIDS, Dermatology, and Sexually Transmitted Diseases. Ministry of Health. 2001 July Report. Cambodia: Ministry of Health, 2001:20.
- 5 **Axelsson O**, Fredrikson M, Ekberg K. Use of the prevalence ratio versus the prevalence odds ratio as a measure of risk in cross sectional studies (letter). *Occup Environ Med* 1994;**51**:574.
- 6 **Visrutaratna S**, Lindan CP, Sirhorachai A, *et al*. Superstar and model brothel: developing and evaluating a condom promotion program for sex establishments in Chiang Mai, Thailand. *AIDS* 1995;**9**:S69-75.
- 7 **Wong ML**, Chan RKW, Koh D. A sustainable behavioural intervention to increase condom use and reduce gonorrhoea among sex workers in singapore: 2-year follow-up. *Prev Med* 1998;**27**:891-900.
- 8 **World Health Organization**. *The female condom. A review*. Geneva: Special Programme of Research, Development and Research Training in Human Reproduction, WHO, 1997.
- 9 **Sinpisut P**, Chandeying V, Skov S, *et al*. Perceptions and acceptability of the female condom (Femidom) amongst commercial sex workers in the Songkla province, Thailand. *Int J STD AIDS* 1998;**9**:168-72.
- 10 **Saphire KE**. The female condom (Femidom)—a study of user acceptability. *S Afr Med J* 1995;(10 Suppl):1081-4.

What's in the next issue

Future content

See which articles have just been accepted for publication and preview the table of contents for the next issue a month before it is published

www.stijournal.com